



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/441,055	11/16/1999	YOSHIHIRO USUDA	0010-1057-0	3806
22850	7590	12/19/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			FRONDA, CHRISTIAN L	
1940 DUKE STREET			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22314			1652	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		12/19/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/441,055	USUDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christian L. Fronda	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 21 April 2006.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-9, 11-31, 33 and 35 is/are pending in the application.  
 4a) Of the above claim(s) 1-9 and 11-30 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 31 and 35 is/are rejected.  
 7) Claim(s) 33 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____. 	6) <input type="checkbox"/> Other: _____.

Art Unit: 1652

## DETAILED ACTION

1. Claims 1-9, 11-30, 33, and 35 are pending and under consideration in this Office Action. Claims 1-9 and 11-30 have been previously withdrawn from consideration. Claims 31, 33, and 35 are under consideration in this Office Action.
2. The finality of the previous Office Action dated 11/18/2005 has been withdrawn in view of new rejections and new grounds of rejection.
3. The rejection of claims 28-32 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in view of applicants' arguments filed 04/21/2006.

### *Claim Rejections - 35 U.S.C. § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaeli et al. (*Advances in Polyamine Research* (1983), 4, 519-20; PTO 892) in view of Greene (*Escherichia coli and Salmonella Cellular and Molecular Biology*, 2nd Edition, pps. 542-560, "BIOSYNTHESIS OF METHIONINE", 1996; PTO 1449 of IDS dated 02/16/2000).

Michaeli et al. teach a process for producing L-methionine comprising culturing recombinant strains of *E.coli* having multicopy plasmids containing the metA gene which codes for homoserine transsuccinylase, the first enzyme in the methionine biosynthesis pathway (see entire publication).

The claims differ from the teachings of Michaeli et al. in that Michaeli et al. does not teach the a recombinant *Escherichia* bacterium deficient in the metJ gene encoding a repressor of the L-methionine biosynthesis system.

Greene teach the *E.coli* repressor of the L-methionine biosynthesis system encoded by the metJ gene (see entire publication, especially p. 552)

Art Unit: 1652

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Michaeli et al. such that the metJ gene taught by Greene is inactivated in order to make the recombinant *E.coli* having multicopy plasmids containing the metA gene taught by Michaeli et al. deficient in the *E.coli* repressor of the L-methionine biosynthesis system. One of ordinary skill in the art at the time the invention was made would have been motivated to do this for the purposes of having a simple culturing method that produces L-methionine, where inactivation of the metJ gene encoding the *E.coli* repressor of the L-methionine biosynthesis system would lead to increased amounts of produced L-methionine. One of ordinary skill in the art at the time the invention was made would have had a reasonable expectation of success since recombinant molecular biology techniques for inactivating genes are well known and developed in the art.

### ***Conclusion***

6. No claim is allowed.
7. Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L Fronda whose telephone number is (571)272-0929. The examiner can normally be reached Monday-Friday between 9:00AM - 5:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura N Achutamurthy can be reached on (571)272-0928. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLF

09441055-500.DOC



TEKCHAND SAIDHA  
PRIMARY EXAMINER